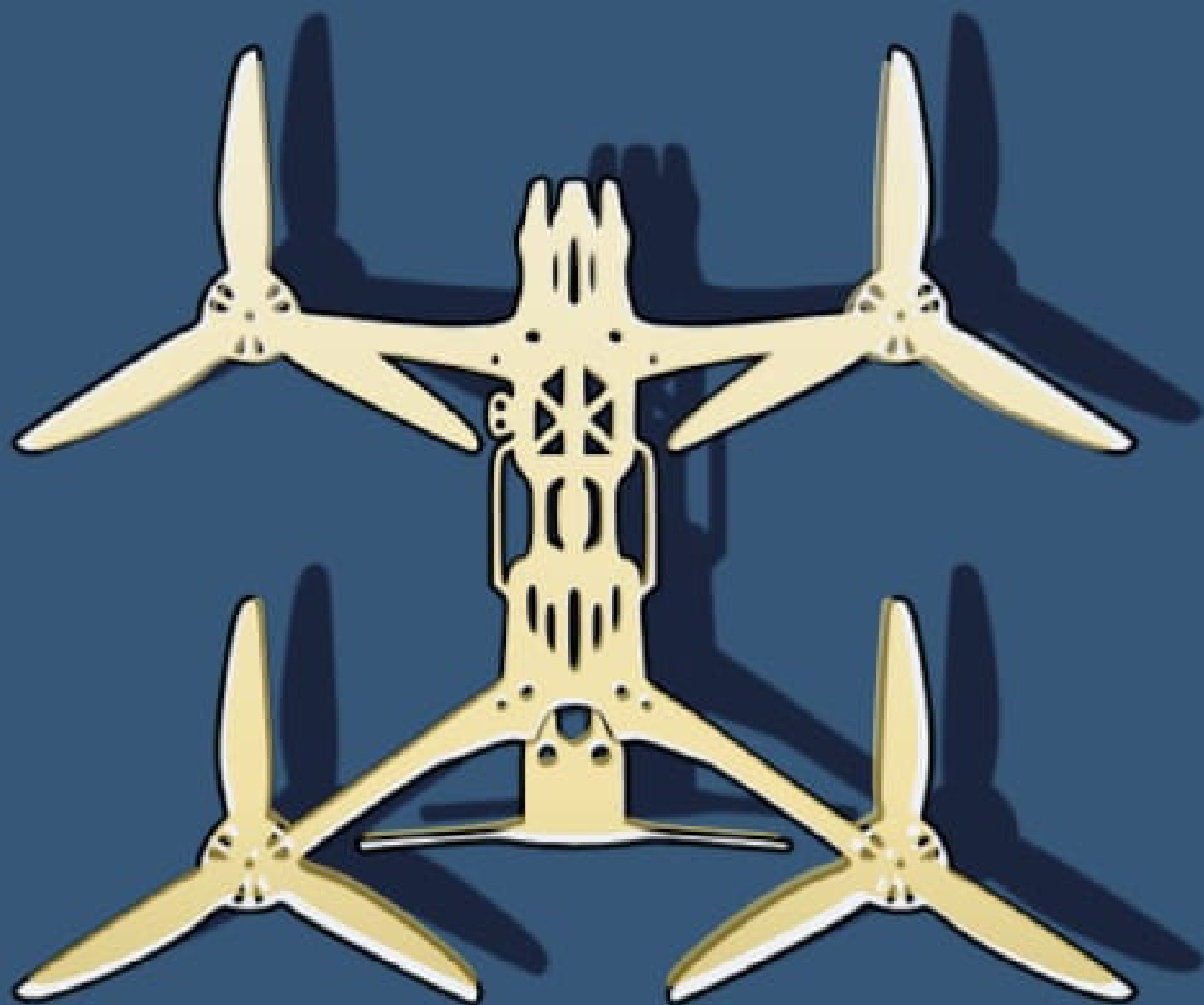


ASPIRE

ACHIEVEMENTS OF SPORTS, PROJECTS, INDUSTRY, RESEARCH & EDUCATION



DEPARTMENT OF

MECHANICAL ENGINEERING

From the HoD's desk.....



Dr. K S Vijay Sekar

Professor and Head,
Department of Mechanical
Engineering

We are delighted to bring you the May edition of Aspire!!

We profile John J. Hopfield and Geoffrey E. Hinton, who jointly won the 2024 Nobel Prize in Physics for their foundational discoveries and inventions that enable machine learning with artificial neural networks.

Roshni Nadar Malhotra, Chairperson of HCLTech, has been honored as The Hindu Trailblazer in Tech. She has cemented her legacy as the first woman to lead a listed IT company in India. It's a matter of great honor for the entire SNF family. The Institute organized a Sycon event, where two Mechanical alumni were invited to share the dais and deliver inspiring talks on their journey in entrepreneurship.

The department conducted three value-added courses for UG students – “IoT for Manufacturing” by Janatics, with a hands-on session at Brakes India Ltd. The second course was on “Designing Press tools for Manufacturing Sheet Metal Parts” and the third course on “Statistical analysis using R”. Workshops on genetic algorithms and Artificial neural networks were organized for the benefit of PG and research scholars and a workshop on E waste was conducted for students through the ASM chapter. The faculty continues to push the envelope into research publications.

Mech III year students spent a week at the Daikin facility in Sri City and learnt about fundamentals in R&AC. The final year farewell was conducted with much fanfare and enthusiasm and awards were given to deserving students for their valuable contributions to the department over the year. Alumnus shares his experience with the Caterpillar company.

Best wishes for a pristine May,

KSV
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“There is no road to happiness, happiness is the road itself “

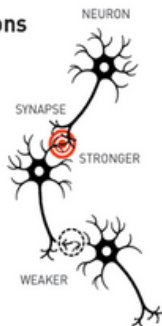
THEY USED PHYSICS TO FIND PATTERNS IN INFORMATION!

- JOHN J. HOPFIELD, GEOFFREY HINTON

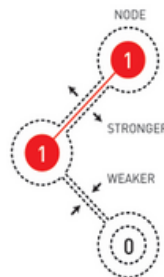
The Nobel Prize in Physics was awarded to John J. Hopfield and Geoffrey Hinton for their pioneering work that applied principles of physics to understand and model complex information systems. John Hopfield introduced the concept of associative memory networks, where patterns are stored and retrieved using an energy-based model inspired by atomic spins in magnetic materials. In a Hopfield network, each node functions like a pixel or a small magnet, and the entire network behaves like a physical system striving to minimize its energy. When presented with an incomplete or distorted input, the network iteratively updates itself to reduce energy and recover the closest matching stored pattern.

Natural and artificial neurons

The brain's neural network is built from living cells, neurons, with advanced internal machinery. They can send signals to each other through the synapses. When we learn things, the connections between some neurons get stronger, while others get weaker.



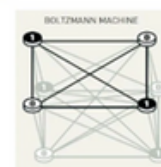
Artificial neural networks are built from nodes that are coded with a value. The nodes are connected to each other, and when the network is trained, the connections between nodes that are active at the same time get stronger, otherwise they get weaker.



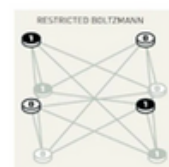
Different types of network



John Hopfield's associative memory is built so that all the nodes are connected to each other. Information is fed in and read out from all the nodes.



Geoffrey Hinton's Boltzmann machine is often constructed in two layers, where information is fed in and read out using a layer of visible nodes. They are connected to hidden nodes, which affect how the network functions in its entirety.



In a restricted Boltzmann machine, there are no connections between nodes in the same layer. The machines are frequently used in a chain, one after the other. After training the first restricted Boltzmann machine, the content of the hidden nodes is used to train the next machine, and so on.

Geoffrey Hinton, widely known as the "Godfather of AI," extended Hopfield's ideas by developing the Boltzmann machine, which applies statistical physics to enable machines to learn from data. These machines learn by adjusting internal parameters in response to training data, gradually identifying the most likely configurations based on probability—similar to how physical systems evolve toward their most probable states. The Boltzmann machine can recognize recurring elements in data and generate new patterns, making it a foundational model in the field of machine learning. Hinton's contributions laid the groundwork for today's deep learning revolution, influencing everything from computer vision to natural language processing.

Together, Hopfield and Hinton forged a powerful connection between physics and artificial intelligence. Their innovative use of physical principles to decode and process information has significantly advanced the development of neural networks. This cross-disciplinary approach not only deepened our theoretical understanding but also led to real-world AI applications that impact daily life—such as facial recognition, voice assistants, language translation, and autonomous systems. Their work exemplifies how blending scientific disciplines can lead to transformative breakthroughs.

SYCON 2025 – THE FLAGSHIP EVENT OF SSN LAKSHYA

SYCON 2025, the flagship event of SSN Lakshya, lit up the campus on April 8th with an incredible surge of energy, enthusiasm, and inspiration. With a grand opening that included the Tamil Thai Vazhthu and the Lakshya Annual Report, the event set the stage for a day filled with transformative talks and thought-provoking conversations. The speaker lineup featured an eclectic mix of trailblazers including RR Tamilselvan, Dharaneshvar Vetrivelan, Arasi Arul, Harish V, Ramdhan M.P, Irfan Husain, JJ Anand Edward, Shan Sundaram, Anna Durai, and Kalaiselvan J. Each speaker shared deeply personal and powerful stories that resonated with the audience—covering themes from resilience and leadership to entrepreneurship, health, and innovation.

Highlights included the keynote by RR Tamilselvan, founder of Salem RR Biryani, who captivated everyone with his journey from a humble food stall to a thriving restaurant chain. J J Anand Edward spoke on global operations and strategic leadership, while Dharaneshvar Vetrivelan energized the crowd with his fitness mantra and disciplined lifestyle. Irfan Husain drew from his multifaceted journey across the navy, sports, and business, offering insights on excellence and adaptability. Social impact and innovation took center stage through Arasi Arul's work for vulnerable communities and Ramdhan M.P's creative-tech vision at Artyland. Harish V made financial wisdom accessible, and Anna Durai's story of service as a social entrepreneur left the audience moved. Kalaiselvan J inspired with a peek into precision engineering, while Shan Sundaram wrapped it up with a compelling narrative on sustainability and tech-driven change.

The Studentpreneurs Panel, moderated by Justin Beneto, spotlighted young founders balancing academics and innovation, offering a refreshing look into the fearless spirit of student entrepreneurship. The event concluded with a warm vote of thanks and an award ceremony honoring the Lakshya members who worked tirelessly behind the scenes. From start to finish, SYCON 2025 wasn't just an event—it was a celebration of purpose, passion, and the power of ideas to ignite change.



ROSHNI NADAR MALHOTRA HONOURED AS THE HINDU TRAILBLAZER IN TECH

We are proud to celebrate Roshni Nadar Malhotra, Chairperson of HCLTech, who has been honoured as The Hindu Trailblazer in Tech. She has cemented her legacy as the first woman to lead a listed IT company in India.

Under her visionary leadership, HCLTech has expanded its global footprint, delivering innovation and excellence. Beyond business, her philanthropic initiatives through the Shiv Nadar Foundation have been instrumental in transforming education across India.

Roshni has also been recognized on Forbes' World's 100 Most Powerful Women list for the seventh consecutive year (2023), inspiring countless women in STEM and leadership roles. Her journey stands as a beacon of empowerment, vision, and dedication for future generations.



International Journal Publication - SCI /Clarivate Indexed



Jagadish, Divya Zindani, Arun Selvam,, Ghanshyam G. Tejani, Johnson Santhosh, Title: Optimization of process parameter for green die sinking electrical discharge machining: a novel hybrid decision-making approach, Nature 2025, Scientific Reports 15, **Impact Factor: 3.8**



Sundararajan Rajkumar, Title: A review on green hydrogen production pathways and optimization techniques, Process Safety and Environmental Protection, Volume 197, May 2025 Volume: 197, ISSN Print: 0957-5820, ISSN Online: 1744-3598, Pages: 107070-107070, **Impact Factor: 6.9**



Madhavan Pillai, S.Vijayan, R Sundareswaran, Said Broumi - Title: Multi Criteria Decision Making Using Linguistic Fermatean Neutrosophic Number,International Journal of Neutrosophic Science (IJNS) , Volume: 26, Pages: 192-205.

International Journal Publication - SCI /Clarivate Indexed



Sasidharan R, S R Koteswara Rao, S Vijayan - Title: The Effect of Activated flux and shielding gas mix of Argon-Nitrogen on the bead geometry of Duplex Stainless Steel 2205 Gas Tungsten Arc Welds, *la metallurgia italiana* 2025, Volume: 116, ISSN Print: 1026-0843, Pages: 34-50, Impact Factor: 0.539



S. Santosh, M. Prem Ananthb, Ravanneswarran G R, Poovazhagan Lakshmanan - Title: Optimizing laser parameters using DEAR methodology for cutting stent profiles on NiTiCo-SMA, *Materials and Manufacturing Processes*, Volume: 1, ISSN Print: 1042-6914, ISSN Online: 1532-2475, Pages: 1-15, Impact Factor: 4.1

VALUE-ADDED COURSE ON "IOT FOR MANUFACTURING" BY DR. SATHEESH KUMAR GOPAL

A one-credit Value-Added Course on “IoT for Manufacturing” was organized by the Department of Mechanical Engineering at SSN College of Engineering in collaboration with Janatics India Private Ltd., and was conducted by Dr. Satheesh Kumar Gopal. Designed for second-year UG and first-year PG students, the course benefited 20 participants and comprised 15 hours of sessions delivered in both online and offline modes. The online sessions, held across three Saturdays in March 2025, covered key topics such as IoT architecture, communication protocols, cloud platforms, sensors, actuators, embedded systems, and real-world industrial applications. The course concluded with a full-day offline practical session and assessment on April 5, 2025, at Brakes India Technical Training Centre, Ambattur, where students engaged in hands-on demonstrations using an MMS Station, providing them with valuable exposure to the integration of IoT technologies in manufacturing systems.

S. No.	Date	Time slot	Mode	Time hours	Content
1	08.03.2025	09.30-12.30	Online	3	· Introduction to the Internet of Things (IoT) · IoT system Architecture and key components · IoT Communication Protocols
2	15.03.2025	09.30-12.30	Online	3	· Cloud platform for IoT · Sensor Technology and Data Collection · Actuators and Device Control in IoT
3	22.03.2025	09.30-12.30	Online	3	· Embedded Systems for IoT · Industrial IoT Devices and Gateways · IoT Use Cases and Real-World Applications
4	05.04.2025	Full day	Offline	6	· IoT Demo - MMS Station · Assessment
Total Hours				15	

HANDS-ON SESSION : BRAKES INDIA TECHNICAL TRAINING CENTRE, AMBATTUR, CHENNAI ON 05.04.2025



Most of us reached the centre before 9 am and were warmly let into the waiting room. Had an initial engaging discussion with Mr. Chirstopher Ruben, Principal, Brakes India Technical training centre. An affable person, he clearly set the goals of the day through the historic perspective of this great institution pioneering in the space of technical training.

The expansion of their activities to other new countries and growing demand for their services across the country provides the confidence any mechanical engineer deserves to hear. Mr. Yadhunath and Mr. Mohan Krishnan from Didactics joined us early in the day and stayed till the end of the day overseeing the activities. A quick inauguration was done with an invocation song and the dignitaries set the platform for the day for all the student attendees.

Mr. Sreeram, the training officer, took over and led us through the day gracefully dealing with the enthusiastic students, deftly handling them and their questions with ease. The session served as an excellent introduction to the applications of Programmable Logic Controllers (PLCs) and the concept of Industrial Internet of Things (IIoT) in modern manufacturing systems.



Key takeaways from the training included:

- Modular Manufacturing System (MMS), to understand IIoT
- PLC systems using LogicXPro software
- Hands-on programming of PLCs

The pedagogy utilized for each concept that were delivered throughout the day was appropriate. The organized way of delivering the content right from setting the examples, and to the quizzes & tasks in between shows not just the expertise of the individual but also of the fool-proof system that have been evolved by Brakes India. Mr. Kishore was ably supporting Mr. Sreeram and was very active in the background through out the day.

Meanwhile, Mr. Kasturi Rangan took Mr. Mohan and me around the training space and explained in detail all the software facilities, machine tools, VR training unit and the process of training for each programme. His session ended with a demonstration of CAM simulation tool.



The lunch was special and was feasted upon by us. The tea breaks were only improving the josh of the students further and everything came to the logical end by 5 pm. Prior to this there was a feedback session where the students were taking it so seriously as if they were taking their end-sem examination. That shows the gratitude for the learning that they were bestowed at Brakes India. I am certain that it was a transformational experience for many of them.



For the institutes, this interaction has brought out many possibilities for the future, a few of which are listed below for discussions later:

- Internship for selected students
- Reskilling/Upskilling for the Non-teaching staff (NTS)
- Training programmes for short durations
- Curriculum development & research
- MOU for training and collaboration activities

Overall, it was a delightful learning experience, and the benevolent hospitality was the icing on the cake. On behalf of the students, I would like to express my sincere thanks to the trainers for their generous yet structured knowledge transfer. On behalf of SSN, I would like to thank the managements of Brakes India and Janatics for making this 'value added course' a memorable event. Looking forward to further the discussion on possibilities of collaborative activities for the future. I would like to thank our HOD Dr. K.S. Vijay Sekar as the contact with Janatics was first established by him. Wishing more such programs could be conducted with the help of our magnanimous management for the benefit of our students.

REPORT ON 1-DAY WORKSHOP CONDUCTED BY ASM STUDENTS CHAPTER ON ECO-FRIENDLY AND SUSTAINABLE PRACTICES

- BY DR. D. ANANTHAPADMANABAN, DR. K. JAYAKUMAR, AND DR. R. DAMODARAN

The ASM Students Chapter organized a 1-day workshop with a focus on eco-friendly and sustainable practices, carefully curated by the co-ordinators to ensure its relevance in the present day. The workshop was conducted in a hybrid mode, with 15 participants actively engaging in the sessions.

Session 1: Dr. Arthur Jebastine Sunderaj, Assistant Professor, Department of Mechanical Engineering, St. Joseph's Institute of Technology, delivered a session on eco-friendly and sustainable electronics. He discussed the sources of e-waste generation and its disposal, offering solutions to minimize and recycle e-waste effectively.

Session 2: Dr. Santhosh, Assistant Professor, Department of Mechanical Engineering, SSNCE, spoke about hazardous waste treatment, with a focus on chemical waste. He highlighted the difference between incineration and combustion, while also covering plastic waste and its proper disposal methods.

Looking ahead, the chapter plans to continue exploring this emerging area and seek collaborations for joint projects.



VALUE ADDED COURSE ON DESIGNING PRESS TOOLS FOR MANUFACTURING SHEET METAL PARTS

A value-added course on Designing Press Tools for Manufacturing Sheet Metal Parts was offered to third-year Mechanical Engineering students, with 27 students enrolling. The course commenced on 10th March 2025 with an inaugural session by Dr. K. S. Vijaysekar, HOD/Mechanical, and a guest lecture by Mr. D. Ramamoorthy, CMD of Applied Engineering Technology (P) Ltd. He provided an insightful overview of sheet metal manufacturing, types of press tools, and the critical role of Geometric Dimensioning and Tolerancing (GD&T) in precision design. The curriculum progressed to practical aspects of press tool design—including bending and deep drawing tools—using the PSG Data Book for calculations. Quality control concepts like FMEA, MSA, and PPAP were introduced, along with real-life strategies for vibration damping. A detailed discussion on defects in deep drawing and industrial case studies enriched student understanding. The final session on 7th April 2025 focused on simulation-based design validation using ANSYS. Assignments and mini-projects supplemented learning, and an exam is scheduled for 28th April 2025. The course, coordinated by Dr. R. Rajeswari (ASP/Mechanical), bridges academic learning and industrial relevance, equipping students for future placements.



DR. K.S. VIJAY SEKAR INVITED AS BOARD OF STUDIES MEMBER AT AMET UNIVERSITY

Dr. K.S. Vijay Sekar, Professor and Head of the Department of Mechanical Engineering, was invited as a Board of Studies member at AMET University on 4th April 2025. He had the opportunity to contribute to the development of the Mechanical Engineering curriculum and syllabus, offering valuable academic insights. As a maritime-focused institution, AMET University presents a unique environment where Mechanical Engineering students, many of whom aspire to transition into marine engineering in their second year, demonstrate a commendable level of interest and ambition. Dr. Vijay Sekar extended his appreciation to the Mechanical Engineering team at AMET for the warm invitation and meaningful discussions.



VALUE-ADDED COURSE ON “STATISTICAL ANALYSIS USING R” EMPOWERS STUDENTS WITH DATA-DRIVEN INSIGHTS

The Department of Mechanical Engineering at SSN College of Engineering organized a Value-Added Course on “Statistical Analysis using R” for third-year undergraduate and first-year postgraduate students. Held from 28th March 2025, the 15-hour course saw the participation of around 25 students and was coordinated by Dr. K.S. Vijay Sekar and Dr. Divya Zindani. The sessions were conducted by Dr. Jagdish from the Indian Statistical Institute (ISI), Bangalore, a noted expert in applied statistics and computational analysis, adding depth and relevance to the course.

The course was designed to enhance students' proficiency in statistical analysis using the R programming language—an essential tool for data analytics. Structured into three modules, the course covered an introduction to R, descriptive and inferential statistics, and regression and correlation analysis. The sessions were interactive, blending theoretical instruction with practical hands-on exercises. Students learned to interpret data, perform hypothesis testing, and visualize trends using RStudio, developing skills applicable in design, quality control, and research.

Participants appreciated the hands-on methodology, which helped them gain confidence in applying statistical tools independently. The course laid a foundation for advanced topics such as Design of Experiments (DoE) and Reliability Analysis. Certificates of participation were distributed by Dr. Vijay Sekar K S, Head of the Department, in a brief concluding ceremony. The initiative reflects the department's commitment to equipping students with contemporary, industry-relevant analytical tools.



INDUSTRY COLLABORATION

01/04/2025	Dr KS Vijay Sekar/Prof and Head/MECH discussed a industry collaboration with Mr. Vikas Sagar and Mr. Sanjay Varma of Kalido company at SNUC on 01.04.2025. The meeting was arranged by SNUC.
02/04/2025	Dr KS Vijay Sekar, Prof & Head/MECH participated in a collaborative discussion with Mr. Veeranagouda Patil (Sustainability Practitioner) and Ms. Anju Mary Kuruvilla (Head of Industry Affairs) of Danfoss company in the Chemical department on 02.04.2025. The meeting was arranged by Chemical department.

EXTERNAL RECOGNITION

10/03/2025	Dr.R.Vimal Samsingh, ASP/Mech delivered a guest lecture on INNOVATION AND PRODUCT DEVELOPMENT FOR TRANSLATORY RESEARCH at Sathyabama Institute of Science and Technology, Chennai on 10.3.2025
11/04/2025	Dr. Poovazhagan.L, ASP/Mech. invited as external examiner for PhD viva voce examinations held at Saveetha University, Chennai on 11.04.2025.
04/04/2025	Dr KS Vijay Sekar, Prof& Head/MECH was invited as a Board of studies member for the Mechanical Engineering department of AMET university, on 04.04.2025
26/03/2025	Dr. S.Suresh Kumar has been invited as a session Chairman for the international conference held at SSNCE - Department of Bio-medical Engineering on March 26, 2025. The conference name is "Eleventh International Conference on Bio signals, Images, and Instrumentation (ICBSII 2025)"
10/03/2025	Dr.R.Vimal Samsingh served as evaluator for the Defence Innovation office for assessing start-ups who have applied for IDEX and ADITI challenges . The challenge is to assess start ups and award them with a grant of 1.5 and 100 Crores
25/04/2025	Dr. S. Vijayan, Prof/Mech has been invited as a session chair for an International Conference on Recent Trends in Materials Science & Mechanical Engineering (ICRMSME 2025) scheduled to be held on the 25th April 2025 at St. Joseph's Institute of Technology.

WORKSHOPS ORGANISED

24/04/2025	Dr. K. Babu, Associate Professor/Mech along with Dr. R. Rajeswari, Associate Professor/Mech and Dr. Vimal Sam Singh, Associate Professor/Mech have successfully conducted a One Day Workshop on "Genetic Algorithm and Fuzzy Logic" on 10-April, 2025
24/04/2025	Dr. K. Babu, Associate Professor/Mech along with Dr. R. Rajeswari, Associate Professor/Mech and Dr. Vimal Sam Singh, Associate Professor/Mech have successfully conducted a One Day Workshop on "Particle Swarm Optimization, Simulated Annealing and Artificial Neural Network" on 17-April, 2025
20/04/2025	Dr.S.Suresh Kumar, ASP/Mech conducted a one day workshop titled "Seyal Vadivam The DesignThinking & Innovation Series" at KPR College of Arts Science and Research, Coimbatore on 20th March 2025.
08/04/2025	Dr.D.Ananthapadmanaban, Dr.K.Jayakumar and Dr.R.Damodaram conducted One day workshop on Sustainable E-waste Management: Effective strategies for Eco friendly disposal and Recycling on 08/04/2025

NON-TEACHING STAFF ACTIVITIES

29/03/2025	Mr.Giridharan M/ Lab Instructor / Mechanical involved in 25 th Graduation day held on 29.03.2025 at Sri sivasubramaniya Nadar College of Engineering.
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EVENTS ATTENDED

13/04/2025 & 14/04/2025	E. Bharath, A. Surya and R. Prakash (Co-Author) presented a paper titled Discharge Phase Study of Thermal Energy Storage System Using Nano-Embedded Paraffin Encapsulated in Internally Finned Spherical Balls in the Third International Conference on Sustainable Energy Resources, Materials and Technologies (ISERMAT2025) organized by Mechanical Engineering, Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, Chennai on February 13 and 14, 2025.
13/04/2025 & 14/04/2025	S. Hariharan, Aswanth Ramesh, A. Surya, R. Prakash (Co-Author) presented a paper titled Experimental Study on Paraffin-based Latent Heat System using Internally Finned Spherical Encapsulations in the Third International Conference on Sustainable Energy Resources, Materials and Technologies (ISERMAT2025) organized by Mechanical Engineering, Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, Chennai on February 13 and 14, 2025.
13/04/2025 & 14/04/2025	Aadhitya Subramoniam, Jedidiah Jeshurun Antalin, Harish P K, A. Surya and R. Prakash(Co-Author) presented a paper titled Recent Advancements in Carbon-Based Nano-Enhanced Phase Change Materials for Thermal Energy Storage Applications in the Third International Conference on Sustainable Energy Resources, Materials and Technologies (ISERMAT2025) organized by Mechanical Engineering, Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, Chennai on February 13 and 14, 2025.

EVENTS ATTENDED

13/04/2025 & 14/04/2025	A. Arun, S. Santosh, R. Prakash, A. Surya and C. Subramaniyan (Co-Author) presented a paper titled Performance Analysis of a Diesel Engine Fueled with Mahua Oil Biodiesel Blended with Nanoparticle Additives in the Third International Conference on Sustainable Energy Resources, Materials and Technologies (ISERMAT2025) organized by Mechanical Engineering, Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, Chennai on February 13 and 14, 2025
13/04/2025 & 14/04/2025	E. Ezhilarasan, G. Shrithesh, A. Surya and R. Prakash (Co-Author) presented a paper titled Sustainable Building Practices for Enhancing Energy Efficiency, Urban Resilience, and Climate Adaptation in the Third International Conference on Sustainable Energy Resources, Materials and Technologies (ISERMAT2025) organized by Mechanical Engineering, Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, Chennai on February 13 and 14, 2025.
13/04/2025 & 14/04/2025	M. Dharaneish, G. Kavayan, A. Surya and R. Prakash (Co-Author) presented a paper titled Efficient Thermal Energy Storage Solutions Using Inorganic Phase Change Materials in the Third International Conference on Sustainable Energy Resources, Materials and Technologies (ISERMAT2025) organized by Mechanical Engineering, Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, Chennai on February 13 and 14, 2025.

CONSULTANCY DETAILS

Dr. S.S. Mani Prabu has secured a consultancy project from MG Health Tech Inc, a health tech startup based in Texas, USA. The project focuses on the feasibility analysis and development of soft actuators and piezo/triboelectric sensors for biomedical device applications. A project staff with mechanical design and simulation expertise will be engaged for the six-month project, which is valued at 1,33,340.

SCHOLAR INFORMATION

21/04/2025	Dr. R. Prakash, ASP/Mechanical conducted the confirmation DC Meeting for his part-time research scholar, Mr. E. Balakrishnan on 21.04.2025
21/04/2025	Dr. R. Prakash, ASP/Mechanical conducted the IV DC Meeting - Subject Expert for Oral Examination for his full-time research scholar, Ms. P. Naveenkumar on 21.04.2025

NATIONAL CONFERENCE ATTENDED

21/04/2025	KL Harikrishna, Title: Design and development of lopping mechanism for cleaning tree branches on roadways.
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ANURAAG R OF 3RD YEAR WRITES...

The SSN-SAE Club members recently participated in a one-week training program at Daikin Industries, Sricity, focusing on Refrigerated Transportation Vehicles — a key part of cold chain logistics. During the visit, members explored how mobile refrigeration systems operate, particularly the integration of compressors with the vehicle's engine.

Industry experts explained various drive mechanisms like belt drives and Power Take-Off (PTO) units, emphasizing how efficient cooling is maintained during both running and idle conditions. The team also gained insights into insulation techniques, refrigerant selection, and system control strategies to ensure consistent temperature management during transport.

This hands-on exposure sparked strong curiosity among members about automotive HVAC systems and their vital role in sectors like food, pharmaceuticals, and chemicals. The experience has inspired new project ideas and research directions within the club.

Overall, the training at Daikin Industries was a valuable opportunity, enhancing our technical knowledge and motivating us toward innovative thinking in automotive technologies.



YASWANTH KARTHICK FROM 3RD YEAR WRITES...

A group of 20 students from the Department of Mechanical Engineering had the unique opportunity to attend a one-week industrial trainee program at Daikin HVAC&R, under the Air Conditioning Technology & Development Centre (ACDC), located at Sricity, Andhra Pradesh. The program provided in-depth exposure to modern HVAC technologies, combining theoretical knowledge with hands-on experiences and industry-level insights.

Day 1 began with an orientation introducing Daikin's global presence, its innovation-driven approach, and its vision for sustainable cooling technologies.

Day 2 focused on the fundamentals of air conditioning, including refrigeration cycles, major system components, and energy efficiency principles.

On Day 3, students participated in theory sessions followed by a detailed walkthrough of residential air conditioning systems, with a special introduction to Daikin's advanced VRV (Variable Refrigerant Volume) technology.

The subsequent days included hands-on workshops where students explored assembly, wiring, and troubleshooting techniques. They also toured Daikin's testing facilities, gaining exposure to product validation processes and quality assurance practices.

Interactive sessions with industry experts provided deeper insights into the future of HVAC, smart systems integration, and sustainability initiatives.

The training concluded with group presentations, sparking enthusiasm among students to pursue careers in HVAC and advanced mechanical engineering fields.



MITHILA FROM 4TH YEAR WRITES...



It began in my second year of college when I first learned about AME and aspired to serve as its President. Motivated by a desire to lead and contribute, I set my sights on this goal early on.

Throughout my academic life, I naturally gravitated toward leadership roles. In school, personality development opportunities were limited, but college opened up a world of possibilities. I firmly believe leadership is not just innate—it can be built through dedication. With that mindset, I consciously worked on developing my skills.

My leadership journey started as a class representative. Later, I served as captain of the women's badminton team, organized InvenTe for two consecutive years, coordinated internships, edited departmental magazines, and actively participated in extracurricular activities, all while maintaining academic excellence. Hunger to achieve, I believe, always finds a way.

Being a woman President has been especially meaningful. I hope to have set a positive example for more women in our department to aspire to leadership, fostering greater diversity and inclusivity.

Serving as AME President gave me real-world organizational experience. After nearly seven years, our department was made the overall in-charge of InvenTe, our flagship technical fest. Handling finance, logistics, and last-minute challenges with the CC team taught us resilience, teamwork, and planning under pressure. Personally, this journey helped me sharpen negotiation skills, expand my network, and enhance my people management abilities. I am grateful for this opportunity, which has shaped me into a more capable individual.

I would like to sincerely thank our HOD, Dr. Vijay Sekar sir, Dr. R. Vimal Samsingh sir, all faculty members, my friends, and my family for their unwavering support throughout this journey.

B R VIMAL KUMAR BHARATHI (MECH 2022) SHARES...



Hello everyone, I am glad to share my incredible experience as a design engineer at Caterpillar. I joined Caterpillar in January 2022 as an intern and later in August as a full-time employee.

As an associate engineer, I work on designing hydraulic fluid lines for bulldozers. Before beginning to collaborate with my team, I got a chance to work with the hydraulic components team, where I executed multiple projects on hydraulic cylinders and systems. This experience proved invaluable to my learning and enabled me to onboard smoothly into my team.

My current work primarily consists of designing new hydraulic lines for various applications in track-type loaders and bulldozers and validating them with a suite of proprietary tools that Caterpillar possesses. My job role consistently requires me to interact with various teams, including structures, engines, and electrical.

All in all, this has been an exhilarating 3 years with amazing learning opportunities. I sincerely thank all my professors, especially Dr. Santhosh, Dr. Suresh M, and Dr. Prakash for mentoring me closely during the final years of my education, without which this opportunity would not have been possible.

No Competition, No Progress

SCodeClash 2025 – The Battle of Algorithms
Lets Code Community

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From the desk of Ramki – Aspire to Inspire

From Ramki

Happy Morning – Aspire to Inspire

Gratitude

When your children or the team members transform where you want them to transform, make a noise about it. Let them know in all the ways that you cherish their initiative. A behaviour recognized and rewarded will be repeated. Recognize them. Reward them. Why should we expect ingratitude from people? Let us build a life of gratitude.



Let it begin with each one of us. Become spontaneous in expressing your gratitude. Today, let your tongue spell out “Thank you” a greater number of times than any other phrase. Nobody gets tired of hearing, “Thank you so much”. While ingratitude is a slow moral poison, gratitude is the mother of all virtues. Ingratitude- never; gratitude – always! It is absolutely okay if you do not remember all that you have done for the world; but never ever forget all that the world has done for you.

#WishingMostAndMore

Have a great day & a wonderful weekend!



Dr. M S Alphin



Dr. Satheesh Kumar G



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